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THE CANADIAN MINER

Vol. I.

TORONTO, ONT., MARCH 27, 1897.

No. 11.

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Exploration has shown the Gold districts of the Province to be extensive and rich, and new finds are constantly being made. In the Western fields the ore is mainly free milling, and wood, water, and labor in abundance provide the requisites for economic working. The yield of gold for the year ending October 31, 1895, was \$50,281, and in the period from November 1, 1895, to September 20, 1896, it reached \$142,605.

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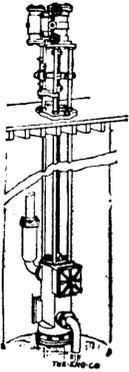
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FIRST-CLASS White Mica Property, 200 acres, in the Township of Methuen, Co. of Peterboro', for sale. This is a rare opportunity. Price moderate. Apply Box 7, Canadian Miner Office.

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Crown Lands sold under provisions of mining laws in force prior to 4th May, 1891, exempt from royalty.

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The Canadian Miner.

VOL. I.

TORONTO, MARCH 27, 1897.

No. 11.

THUNDER BAY IRON.

THE MINNESOTA IRON FIELD RIVALLED AROUND PORT ARTHUR.

The following article on iron, from the pen of a former Port Arthur man who is largely acquainted with the minerals of the Thunder Bay district and with the attempts at development made in that district, will be of interest to many, both in north-western and south-eastern Ontario, in both of which iron fields abound. The writer says in the *Globe*:

There is a great deal of iron showing on the surface all round Port Arthur. In fact there is far more iron in evidence than any other mineral. There is a continuous belt of it, starting from the hills on the south side of the Kaministiquia, and stretching west, north and east for many miles. Many people regard this vein as a continuation of the Aticokan range, which in turn is considered as very much akin to the Minnesota iron. It is no trick to get a large specimen of ore, which will assay as high as 65 per cent. metallic iron, and be well within the Bessemer limit, as far as sulphur, phosphorus and titanic acid are concerned. It is quite a natural and reasonable question to ask: What are the reasons operating to keep this iron out of the market?

In the first place it may be observed that a great deal of the land referred to has been "taken up" for other reasons than for the iron it shows, and people who thought they had gold or silver experience some difficulty in bringing their minds down to the level of mere iron. Some of the land was acquired just on the reputation of the district as a speculation, while not a few hundreds of acres were located by two men who acted in the interests of United States capitalists. It is commonly reported that these men got \$10 an acre from their employers for locating, surveying and purchasing the land. It is quite certain that a great deal of the land they took up does not show on the surface any great riches of iron.

About the Kaministiquia River, on both sides, the iron outcropping almost all shows to be banded with red or black jasper, or the jasper is mingled with the iron, just as though they had been mixed in a huge chaldron. Only three attempts have been made to develop the iron in the district.

IRON DEVELOPMENT.

The first attempt was made on a deposit near Kaministiquia Station, on the C.P.R., about 30 miles from Port Arthur. A commencement was made by making a crosscut into the mingled red jasper and iron, and this was continued about 30 feet. Then a shaft was commenced and sunk 20 feet. There was not any better prospect at the end than at the beginning. Work in that mingled jasper and iron is the most expensive known to the Port Arthur district, and the \$2,000 spent did not prove anything as to the real character of the deposit. In the Marquette region, on the south shore of

Lake Superior, these are the exact surface indications of some of the best iron mines.

The next attempt in the way of iron mine development was made by Mr. Thomas Marks, who spent about \$1,500 on a hematite deposit, near Loon Lake. This is about 25 miles east of Port Arthur. Pits were sunk, which demonstrated that there was a seam of hematite ore at least one-half mile square in area. It lies close to the surface, the iron is of good quality, but the bed was not deemed to be thick enough to justify its practical working.

If the Government drills had been accessible at the times these explorations were made the money spent on them would have for ever set at rest all doubts as to the character and possibilities of these two deposits. There are many people who think that both these locations would well repay further exploitation.

PLENTY OF IRON HERE.

The last essay made at iron ore development in what may be styled the Port Arthur district was commenced in the winter of 1895-6 by Mr. Headstrum of Buffalo. The location is also near Loon Lake. Work was continued into last summer, when the gentlemen became convinced that they had ore of a quality and in quantity sufficient which would pay to ship. Then they got in machinery in order to mine on a considerable scale. The prospects were good and there was plenty of ore in sight. Shipping facilities are good from Port Arthur, and once the ore was placed on the dock there a cheap rate was assured; so the would-be shippers applied to the C.P.R. for a rate on the ore over the great trunk line which was built by Canada in order to open up and develop the country.

The C.P.R. rate to Port Arthur was prohibitive, so the miners were sent home late in last August. The machinery is rusting at the mine. But there will be no loss as far as the ore is concerned. It will be there when some people regain these senses.

AS TO BLANKET DEPOSITS.

A great deal of prejudice exists in the minds of the local men interested in mineral locations on the question of blanket deposits, as the seams of iron ore are designated. They do not know that a blanket deposit is developed and mined much more easily and cheaply than a vertical vein. This has had a great influence in forming the bias against the development of the iron ore of Port Arthur district. Within the town limits there are outcrops of Bessemer ore which show as high as 65 per cent. of metallic iron.

It would well repay an interested person to drive on the Black Bay road to the town line between McTavish and McGregor and proceed west. Right on the road indications of iron will soon be observed and first-class specimens can be picked up. Up the hill you climb and the upper outcrop must be at least 200 feet higher than the lowest. The ores seen are hematite and magnetite. There is a good outcrop of hematite ore within a mile from the limits of Port Arthur and not

more than four miles from a point in Thunder Bay, which has a depth of water of twelve feet. Five hundred dollars spent there would make a serviceable dock for loading a vessel. Then a mile further there is an outcrop of magnetic ore of a promising character. The ore is as good as the hematite but does not show in quite as large quantities on the surface. The furthest of these locations is not more than 5½ miles from the "Government dock" at Port Arthur.

A little further from Port Arthur there is a large deposit of carbonate of iron. This is a low grade ore, but it is reckoned as one of the best forms of ore for local smelting to be found. It does not pay to ship it. An authority on the subject says:—"Very few iron carbonates assay up to more than 40 per cent. of metallic iron, and most of them range from 30 to 33 per cent., but nevertheless they are very valuable as they contain few deleterious impurities and smelt more readily and economically than any other ore, owing to the carbon in them. . . . The celebrated 'Black Band' ore, from which the Scotch pig is produced, is siderite, and so are the iron 'carbonates' of the silver mines near Leadville and elsewhere in the Rocky Mountains." No effort has been made to develop this ore.

With hematite, magnetite and siderite iron ores and an ample supply of wood for charcoal it would appear strange that no iron ore has been practically mined, and that no one has smelted these ores into pig.

In Sweden there are very small charcoal furnaces, and sometime someone with the necessary capital will come to the conclusion that he cannot rest till he has spent some of it in a practical demonstration of the feasibility or otherwise of making iron-smelting a profitable industry in the Port Arthur district.

If a smelter were erected in either Port Arthur or Fort William the municipality supposed to be benefited by such would give a bonus; the municipality of Shuniah also would vote a bonus to such an enterprise.

SOUTH AFRICAN GOLD.

The gold crushings at Witwatersrand for the month of February last were 211,000 ounces. This shows an increase of 1,168 ounces as compared with the previous month's total, and an increase of 43,982 ounces over the production for the same month last year. The following table gives the output for 1892, 1896, and the first two months of 1897:

	1892	1896	1897
	Ozs.	Ozs.	Ozs.
January..	84,560	8	148,178
February	86,649	8	167,018
March...	93,244	11	173,952
April....	95,562	6	176,707
May....	99,436	6	195,008
June....	103,252	3	193,640
July....	110,279	1	203,873
August..	102,322	3	213,418
Septemb'r	107,851	13	202,562
October..	112,167	8	199,890
November	106,794	15	201,113
December	170,748	17	206,518
	1,120,863		2,281,875
			420,832

ONTARIO'S GOLD FIELDS.

AN EXPERT THINKS THEM THE MOST AVAILABLE IN THE WORLD.

We are not quite sure that the bromo-cyanogen process has equalled the expectations of its promoters. The Deloro tests speak favorably, but a little too vaguely, to determine the prospective values of the arsenical ores of Hastings. We give an extract from the *Globe's* interview with Mr. H. Livingstone Sulman, which is of little value as to the process but contains interesting opinion by a clever man.

Mr. H. Livingstone Sulman, of 60 Grace Church street, London, England, who has gained a world-wide reputation as the inventor of the bromo-cyanogen process, which is now being successfully used in the treatment of mispickel ores at the Deloro mines in Hastings county and in other parts of the world, was in the city on Friday, and at the Walker House where he was staying, was the centre of an interested group of mining men from the Lake of the Woods and Seine River districts. Mr. Sulman is just returning from an extended tour through the gold regions in South Africa, West Australia and the Straits Settlements, taken in the interest of a number of English capitalists, and is now hastening home to report in response to a cablegram he received while in the Malay Peninsula. According to what he had to say while here, his report is not likely to be a very favorable one, as, although there was no doubt about the existence of rich gold propositions, yet there were numerous serious drawbacks which made the avocation of gold-mining a very risky business in more ways than one. For instance, in the Coolgardie region in West Australia the miners are very badly handicapped by reason of the scarcity of good water, nearly all the water found there being extremely salt; the high cost of living, which, of course, makes the cost for labor come high; the prevalence of typhoid fever nearly all the time, and the exorbitant charges for transportation. In regard to the latter he gave an instance which came under his own personal observation. At Coolgardie he saw some machinery being put in place which had just arrived from London, England, and was told that since leaving the London docks its original cost had been increased just twenty times, the greater part of the increased cost having been incurred in hauling it over the sand beds lying between the mines and the coast. Another great objection to mining there, he says, is the fly pest. Everyone has to wear a mask for protection, but what is worse than the annoyance, is that, according to expert opinion, typhoid infection is carried around by these same pests, and for this reason the extinction of the fever is counted an impossibility.

The Malay Peninsula has not the same drawbacks as the Coolgardie region, but it has one or two which caused Mr. Sulman to form a very bad opinion of its prospects in regard to gold mining. The principal one was the great difficulties in prospecting and transportation caused by an almost impenetrable jungle which covers the country, and which it is almost impossible to burn on account of the continuous rains. For this reason alone he considers that gold-mining will never be extensively carried on, and that it is a country totally unsuited for the poor man, as it would take him a month at least to prospect an acre.

Of South Africa Mr. Sulman had very

little to say beyond the fact that he considered the troubles with the Boers had only just begun, and that English capitalists had better wait a while before investing any more money there.

Speaking of Canada, Mr. Sulman said he very much regretted that he did not have time to visit the mines here, but he could say that all advices he had received by letters from his employers and other English capitalists during his absence indicated very strongly that Canada now had to some extent the attention of the mining world, and stood first on the list for a gigantic mining boom; as the country, besides having unlimited mineral resources, was particularly free from all the drawbacks found in other countries.

"If," said he, "the mining district of Western Ontario is anything like what it has been represented to me, or what I have read about it, you have a district that is far ahead of anything that South Africa has yet produced, and with its other great advantages, economic and natural, should eclipse anything ever yet discovered."

THE FUTURE OF GOLD MINING.

THE subjoined article from *Mining Industry*, of Denver, contains thought and suggestions worthy of consideration by our readers who represent the careful and progressive element amongst the big crowd who rush into gold speculation as most people rush into partyism, faddism, commonplace selfishness, or anything else that happens to be in the flood. There is just a touch, in one paragraph, of that kind of Americanism that talks about foreigners more intelligent and educated than themselves as interior, because they don't agree with some of the narrow ideas afloat on this continent, and a mistaken reference to the wages in South Africa and Colorado which may be pardoned in a young and clever American writer brought up in the little universe of the United States. But there is thoughtfulness and value in the article. We give part of it:

The increase in precious metal mining, upon which, after all, Colorado's future prosperity is mostly dependent, will probably not be so largely affected in years to come by new discoveries of rich ore resources, as it will be by the ever-increasing purchasing power of gold, aided by innovations in the treatment of low grade ores, the reduction in the cost of labor, the first expense of mining and milling machinery, transportation, and the price of fuel and supplies, as well as the initial cost of the properties themselves.

There is an impression partially true, but in the main erroneous, that each year lower grade gold ores are being worked, and with satisfactory profits. As a matter of fact, but small headway has been made in the metallurgy and other management of gold, except in so far that greater capital is now frequently invested, resulting in larger plants and increased capacities, necessitating a smaller proportionate force of employes in the technical and financial departments, and limited improvements in the mechanical construction, displacing of some labor. The great gain has been in the appreciation of the product and this will be more sensibly felt hereafter. A mine that 12 years ago yielded 12 pennyweights of gold per ton; is yielding nearly as much now in purchasing value if its average is but 6 or 8 pennyweights; so that really gold mining has not developed to embrace in the list of profitable mines any of much lower grade ore than heretofore, but general business, rather, has

descended to a very low basis to meet a higher standard of value.

Everyone would naturally prefer to witness a general revival on the old basis to which the people of the Rocky Mountains are accustomed. The higher grade surface ores, however, are nearly worked out, and the yield of bullion as compared with the amount of labor employed, has greatly decreased, while deeper works and more refractory ores have increased the cost of treatment.

Moreover, the developments in the southern countries of the western hemisphere, and in Africa, where cheap labor is almost exclusively employed [?? Editor] has brought gold mining in the United States in competition with those countries, in the sense that capital for mining ventures seeks the more favorable conditions, and ignores the costly fields.

The reduction of wages is a feature repugnant to every one—[Come on to Canada and become loyal citizens of the country and organize "miners unions" and sensibly, not hysterically, stand by yourselves, miners—enough liberty is yet allowed in our age and country to permit of this]—yet there is no doubt but that the question must sooner or later be met, and the decision made, whether all the western miners shall be kept employed at reduced wages, or only a portion of them at prevailing rates. It is a dilemma in which miners are finding themselves, as other trades have already encountered, and leaves a choice only between two evils, which will adjust themselves with time. From an abstract view, the person who will consider favorably a reduction in wages and general prices is not a most beneficial or desirable member of a community, still if a course can be pointed out, where fifteen men can be employed and earn in the aggregate \$1,000 per month, against five men earning \$500 only, so long as the men are here, largely idle and desiring work, then the consideration of the subject should not be passed without thought and discussion.

The next help to be expected in support of a large addition to the gold mining industry of the west, will be a more sanguine feeling among mining engineers. Mining ventures must be viewed more in the light of industrial enterprises that are expected to yield reasonable incomes on their investments, rather than great risks with phenomenal riches sparsely interspersed amidst numerous great losses. To this end the services of the experienced engineer will be required, who can calculate upon the minutest details and is competent to figure upon the lowest cost of mining accurately, and will take the time to collect reliable information upon the prospective value of a property. Reasonably good fees should always be demanded, and then thorough and conscientious services rendered. Low fees and casual examinations have retarded many a mining district of merit, if they have not actually consigned it to complete oblivion.

The matter of transportation is a most important factor in successful close work. In this direction much difficulty will be encountered in meeting the requirements of the times. The bonded indebtedness and interest on the roads has not decreased with the decline of the general market, and no adjustment appears feasible that will give relief to the industry, except withdrawal of patronage from roads that are overburdened with watered indebtedness until failure follows. A reorganization is then sure to follow upon a basis commensurate with the earning capacity of the communities it serves. As many railway companies are financially con-

stituted, the refunding of debts on a basis more compatible with the times or insolvency appear to afford the only relief that presents itself to the average mind.

Mining machinery and supplies are also out of proportion when compared with former quotations and conditions. Marked reductions have been made in this direction, which, however, are enjoyed mostly by the heavier and best informed consumers only. The occasional purchaser and small operator gets but a minimum of his share of the benefits in this direction. In this connection attention may also properly be called to the exorbitant and fictitious prices quoted on much so-called patented machinery. Much of this is good, but neither new in its plans or utilization. Most of them are hybrids, developed from established products of the past, to meet especial demands. Their cost is light, and the ingenuity expended upon their evolution from the original is not in proportion to the bonus asked above the cost of manufacture. The late great decline in steel rails is a precursor of what is to follow in the iron and manufacturing trade. It is measuring iron and steel, as well as silver by the increased gold standard, and other articles will follow, and as a result the mining of gold ores will become proportionately more profitable and desirable, and the section of country that more nearly adjusts itself to the coming condition of affairs will receive the greatest recognition.

THE COPPER BOOM.

THE excitement in the copper markets of the world, says the *Wall Street Reporter*, shows no signs of diminution. On the contrary it appears to be increasing. The enormous sales of lake copper for export astonish the trade. One sale last week was made of 4,000,000 pounds of copper wire at 11 7-8c. The sale is understood to have been for export to Germany, where the electrical railways are rapidly extending. Copper for 28 electrical railways in England is now being contracted for. One effect of the copper boom is the revival of interest in copper mining properties. Prospecting for new mines is active, especially in Lake regions and old abandoned mines are being put in readiness for reworking if the price of copper is maintained. The old Isle Royal mine, which has been closed down for a generation, will soon resume. The Calumet & Hecla Company expects to increase its output this year by 120,000,000 pounds.

ASSAY AND SMELTER VALUES.

INEXPERIENCED prospectors and mine owners sometimes make serious mistakes concerning the actual market value of their ore, and these mistakes occasionally lead to the development of property from which they are never able to extract a pound of shipping ore. There is a vast difference between the assay value and the product value of ore, as every ore producer well knows, but which occasional owners of prospects do not seem to know. One day recently a man was complaining bitterly because a shipment he had made failed to pay treatment charges, though the assay value of the ore was much above the cost, and he had expended much labor and cash in developing the property. By way of illustration we will take an ore that assays, say, ten ounces of silver, thirty per cent. lead and a half an ounce of gold per ton; the silver would be worth \$6.60, the lead \$15 and the gold \$10.33, a total assay

value of \$31.93. Suppose the cost of mining was \$3, freight \$8, and treatment \$10, a total of \$21; this is \$10 below the assay value of the ore, and, strange as it may seem, there are prospectors and others interested in mining who would insist that the ore can be mined at a profit. But the smelters would figure the value out in this way: Silver, five per cent. off for loss in treatment, leaving \$6.27; lead, ten per cent. off for loss in treatment and \$1.25 deducted for freight charges from smelter to market, leaving \$6.75; gold, \$19 per ounce, making the value of the gold \$9.50; total value of the ore \$22.50. Deduct \$21 for mining, freight and treatment, as above, and we find that the producer would have but \$1.50 left, a very slender margin. Of course these are facts well known to all who have experience in selling ores, but other people are often misled by assay figures.—*Mining Investor*.

ELECTRIC FURNACES.

WHILE not believing that, where coal is employed for driving dynamos, the electric furnaces can generally compete with furnaces directly heated by the combustion of coal, coke, or fuel gas, and, while admitting that producer gas, semi-water gas and water gas itself, have many advantages in common with electric furnaces for special heating where it is desirable to exclude dirt and other impurities from crucibles, Mr. F. Leens, in the *Electrician* (Jan. 22), maintains that the electric furnace is economically comparable with fuel-heated furnaces, wherever cheap water power can be obtained. When the cleanliness, convenience, and ease of regulation of electric furnaces are taken into full consideration, it will be found that the electrical furnace has a future and a field in which it can compete directly with coal even when the latter seems to occupy a perfectly unsailable position. It is because of the capacity to yield—so to speak—"pure, unadulterated heat" that such a future may confidently be predicted for the electric furnace. There are many cases in mechanical construction, and in laboratory work, wherein the power to heat, while excluding air, oxygen, and other substances, is so invaluable that the smaller cost of fuel-heating is not worth a moment's consideration.

ELECTRICITY APPLIED TO GOLD MINING

THE big power plant at Blue Lakes city, Amador county, Cal., is nearing completion and will be ready to transmit light and power along 32 miles of the mother lode in Amador and Calaveras counties about April 1st. Large reservoirs have been built in Slabtown, two miles from the site of the power building. Two 2-phase generators will be shipped from Massachusetts, together with the other electrical apparatus in a few days. It is claimed that this will be 60 per cent. cheaper than the power now used at the mines. The application of electricity to the working of ore is becoming general in all mining regions. *Electricity of New York* says concerning the subject:

"Two important undertakings which have somewhat recently been before the British investor have for their object the generation and supply of electrical power for use in gold mining. One of the schemes is for the extensive gold mining districts of Western Australia, particularly the Coolgardie neighborhood, the matter having been gone into very carefully by English experts who have advised the Westralian Electrical company. It is thought that the growing gold mining industry of Westralia

will afford satisfactory instances for the successful application of electric power transmitted over distances.

"The other undertaking has been, for some time, in course of carrying out. It is that of the Rand Central Electric Works, which supplies electric power to the gold mines of the Rand district in the South African Republic. The Siemens & Halske Company have been very closely identified with this scheme, but there are a number of English shareholders, Sir Charles Rivers-Wilson being the chairman of the company. The capacity of the plant put down, which is equal to about 2,100 horse-power, has been applied for at an average of about £45 per horse-power per annum delivered, including wires and fittings. As this is a cheaper rate than steam power can be obtained it is not very surprising that the demand should have been so ready. The company expects to find it necessary very shortly to extend its plant, and sees its way to good returns on its capital. There are four 3-phase generators in position, these being direct driven by vertical triple-expansion marine-type engines, having a maximum break horse-power of 1,200. Each dynamo weighs 30 tons, and is constructed in four pieces. Eight multitubular boilers, with 200 tubes each, supply the steam. Each is of 600 horse-power, and has 9,300 square feet of heating surface. Only three sets of the plant will be worked at first, the fourth being held in reserve for a time. Some of the mines supplied are situated over 20 miles from the generating station. Current is generated in the dynamos at 700 volts, is raised by means of step-up transformers to 10,000 volts, and at the mines is reduced by step-down transformers to 120 volts for lighting, and 240 to 500 volts for motor work."

H. M. Chance, in a lecture before the Engineers' club of Philadelphia, not long ago, gave a description of the various processes of extracting gold from ores by electricity. He divided them into six classes, each involving a different principle or method of application. The classes are:

1. Electro-magnetic.
2. Electro-solvent.
3. Electro-amalgamating.
4. Electro-precipitating.
5. Electro-inductional.
6. Electro-smelting.

The first class employs electro-magnets to remove magnetic material from the gold with which it is associated. In the second class, the current is used to assist in dissolving the gold from ores by means of chemical solvents of gold. In the third class, the current is passed through the amalgamated plates or mercury to facilitate amalgamation. The processes of the fourth class are electrolytic, the gold being electrically deposited from its chemical solutions. These processes are extensively used in South Africa and to some extent in this country. The fifth method aims to remove gold particles from other materials by the inductive action of high-frequency alternating currents. The sixth method, that of electric smelting, promises well, provided the cost can be reduced to that of ordinary smelting processes.

J. V. Sybrandt, of Springdale, says the *Denver Mining World*, says that an enterprise of considerable magnitude is now being carried on there, engineered by Cincinnati parties. It is the construction of a tunnel through the large mountain lying between Springdale on James Creek and Rowena on Left Hand Creek. The tunnel is now in almost 300 feet and is being pushed as fast as three shifts a day can push it. The entire length will be a mile and a half. A number of good mines are expected to be cut by this tunnel.

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AND

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NOTES AND COMMENTS.

It is well to advise Ontarions and people from the Eastern States not to pour into the Trail District or the Yukon. The placers of the latter are rich, but the climate admits of only a few months work in the year, and despite the high rate of pay, expenses are so high that a miner in Eastern America at \$1.50 a day will make, on the average, more money than in Rossland or Alaska. The Rossland papers very properly warn people against coming there on the chance of mining or carpenter work.

WHAT seem vagaries in mines, but which, no doubt, are explainable by ordinary mechanical laws, are some of the peculiarities of several mines in the Lake of the Woods country. The Sultana, for instance, widens and contracts over and over, spreading into a convex body of ore and narrowing a little between these bologna-like expansions. The increase of the width of the veins which is a general characteristic of the region and of the region tributary to it has not yet been satisfactorily accounted for. The fact is there, and it is an important one.

THE proposal has been made that the Diamond Jubilee of Her Majesty might well be marked in Canada by the issue of gold coin. So far, although gold is the standard money of the country we have never had a Canadian gold coin. The extraordinary gold mining activity witnessed in both eastern and western Canada this year makes the issue of a Canadian gold piece an eminently proper method of celebrating two great events in our national history.

REPORTS from the Deloro mine are that the process of extracting gold from arsenical ore has been eminently successful. No particulars have yet been made public, but the company is said to be preparing to double the capacity for work. The experiments at Deloro are watched with much interest, for their success will solve the question of how profitable the undoubtedly rich but refractory arsenical ores of a considerable belt in south-eastern Ontario can be made. The bromocyanogen treatment is not spoken of favorably by some who have tried it elsewhere.

We suppose that the Deloro treatment is not altogether the same as that reported from abroad.

THE papers brought down by the Ontario Government relating to the grant to the Engledue syndicate for three years of exclusive rights of exploring and developing in a gross area of one hundred square miles in the Rainy River gold districts make interesting reading, especially for mining men. Col. Engledue's request for a series of three years' monopoly over rich tracts for a period of twenty-one years has just a small flavor of the ambition of Cecil Rhodes about it. The territory asked, compared with that granted to companies in South Africa, is almost infinitesimal, and there was no demand made for powers of government. So Col. Engledue, fresh from South African experience, may fairly be credited with considering his request very moderate. The Government, however, did not take that view of moderation. The outcome has been the grant mentioned in the recent papers. The Government no doubt had in view the attraction of foreign capital to our gold fields, and seem to have been morally committed early last fall to giving this huge option.

PEOPLE are being attracted to the Yukon by the richness of the placers there. But the Yukon, rich as it is, has many disadvantages, and miners should think twice, thrice, and a dozen times before venturing into that region on the representations of persons interested in booming it. The Alaskan coast, in the possession of the United States offers little disadvantage, beyond climate, isolation, etc., compared with some regions of the globe. But beyond the barrier of the mountains that belt the coast it is different. If the coast has the climate of Philadelphia, or Washington, or Niagara-on-the-Lake, so far as winter temperature is concerned, east and north on the basin of that vast river truly arctic conditions prevail in that season, and the summer is very short. Men starve on the Yukon, and succumb to scurvy unless they eat abundantly of the potash and salicylate of the willows. We know of men who have braved the eight or nine months of an arctic winter shaded by a penumbra of semi-winter, but they are men who bear solitude and hardship after the manner of some religious hermits. There is abundance of other regions more profitable for the poor placer miner readily available where conditions are not so hard. The expense of getting into the country by Juneau, or any other of the few routes yet accessible, is very heavy; the expense and trouble of getting out is often much greater. There are regions where it is too cold to snow in winter; and even some of the mines where they sink to hundreds of feet have a temperature below freezing constantly surrounding the miner. The yields of ordinary placer mining have occasionally been large; but the disappointments have been very numerous. When later times will ameliorate the conditions of Yukon life, and when there are just as inviting fields elsewhere, it is not worth while for people to stake on the chances now. Even at the coast mines that border on Canadian and United States territory, the lot of the miner, even with high pay, is not a pleasant one. There is little likelihood of Eastern Ontarions being attracted by the boomsters to the Yukon fields, but the "boom" is catching people in Pacific coast states, and owners of Alaska plying vessels have a share in the booming.

A QUIET TALK ABOUT GOLD.

MR. B. FOLGER, the well-known and popular Kingston railway magnate, who has recently dropped on one of the most astounding gold deposits yet known in the history of gold mining, was met by the CANADIAN MINER in Queen's Park the other day. Conversation soon dropped on to the great Hammond-Folger Dyke, in the Seine valley, the story of which to European or South African or Australian ears might read as a tale from the Arabian Nights. "Didn't know what to make of it, and it rather surprised Professor Hille of Port Arthur. I don't know what to call it yet. It has been traced for two miles. It has one wall well defined and regular; the other side is not regular. The vein narrows to 80 feet, and widens to 480 feet, and averages about 200 feet. The many assays taken show very rich ore, from \$4.60 of gold per ton, to over \$300." "What development has been made?" "In one place where the vein or deposit is 142 feet wide they have gone down about 50 feet. But it is not shafting or tunnelling. The stuff is quarried." Mr. Folger's quiet surprise at the golden elephant is natural, and the facts are well known to many who have seen the dyke. No doubt there are many millions in it. No stock is floating on it. It is, we have reasons to believe, not the largest dyke of that wonderful free-milling country away to the north and north-west of this big Province of Ontario. There are single ones which possibly contain more gold that may be quarried, than the entire gold production of the world in the past century. The only region that might be suspected to equal some of these colossal Ontario dykes might be the great Laurentian tract of East Africa. Perhaps there the gold was quarried that made the expression "as common as stones," familiar in Syria. But we don't want wheat to rise to \$3 or \$4 a bushel. That and its other incidents would too much disturb "the even tenor of our ways." We have not the money in Canada to develop our gold fields. Most of it must come from abroad. Investors who think of putting in money here should come themselves and see if these things be true; or they should send competent and trustworthy experts. There are queer things about Ontario gold. It will shortly stagger the world. We are no boomsters. We simply ask the Rothschilds and the British Association to quietly look at what the glacier swept rocks reveal on their very surface. We have tested them only for a few hundred feet in depth. Such is the new wilderness that a few years ago Ontario regarded as almost worthless.

PERSONAL.

Mr. ALFRED CARSE, barrister, now miner and mining broker, of Rat Portage, was a welcome caller at our office the other day. Mr. Carse is well acquainted with the Lake of the Woods and Manitou gold regions, and believes the Rainy River district to be the richest gold region in the world. He has abandoned law for the more profitable business of mining. Some of the samples of ore he had with him from the Neepawa mine were the richest in free gold we have yet seen. The gold appeared in bands in the quartz. A sample of blackjack-schist, shown from the Sweden mine showed under the glass fine particles only here and there of free gold, but the assays of the material resulted in a showing of \$35 to the ton.

AROUND TOWN.

THE proposed Ladies' Syndicate, of which Miss R. L. Leigh-Spencer is the organizer and Miss Clara Brett Martin the legal adviser, is to have a capitalization of \$240,000. The headquarters will be in Toronto.

THE following letter received by W. H. Bleasdel & Co., contains important information about the Spokane-Kaslo property: "I will just state to you that I came down from mines last night and that Mr. Scott, President of the Company, was up to see them and expressed himself as very much pleased with the outlook of the mines as a whole, and in particular the showing in the tunnel and drifts. We ran the drift or cross-cut to the left 20 feet and did not get through the lead. We were compelled to drop it for a few days as we were short a couple of hands. We will replace them in a few days, when we will continue drift to wall. We will also push work in tunnel as fast as possible under circumstances. The last few feet have shown quite a change in tunnel and we would not be surprised if we strike ore in considerable quantity any minute, though I expected to have to go about 100 feet further at least. We have a tremendous lead, and rich, for so near the surface, (100 feet). I do not know the exact width but have cut it 43 feet. I think it is at least 60 feet wide. Have driven tunnel in on vein over 300 feet."—W. A. Davies, Superintendent of Mines

COMPANIES.

THE Ethel Group Gold Mining Co. has made a bold attempt to push very promising prospects in the Trail or Rossland district. The company embraces amongst its directors and brokers several of the best known and trustworthy business and professional men in Toronto. They seem to have complete confidence in their claims, and, judging by the situation of these claims and the development already done, the group promises well. The charter gives very large and varied powers, which in the hands of several of the gentlemen associated with the company should prove advantageous to the shareholders. The financial arrangements have been made with good judgment, and secure the shareholder on preferred stock about as good a guarantee of dividends as any gold mining company yet launched in the British Columbia gold fields. The prospectus of the company sets forth a tempting and we are inclined to think, a substantial promise of results. Development is being conducted with the vigor which means honest belief in the quality of the location, the surroundings of which and the indications in which, promise results not yet surpassed in the Trail Creek district. A new feature calculated to place the company in an effective position for continuous work, is the offer of stock sufficiently guaranteed to insure a large annual return to the investor; in the meantime it is hoped that a year will see profits directly made from the working of the properties. These preferred shares are offered to the public on tender in blocks of 25 shares and upwards, at a minimum price of 75 cents on the par value, which is \$1 per share. With the new light thrown on the character of Rossland ores, as exemplified by the test of exactly similar ores from Le Roi made at the mill of the O.K. mine, the Ethel Group has a great prospect of proving a valuable property. The indications, so far, are very good, and under the competent management which may be expected the group should become a famous

mining property with results advantageous both to the enterprising promoters and to investors.

THE Slocan-Cariboo Mining and Development Company is one of the most promising of the new mining ventures put before the public. The company includes some well-known and acute men, not likely to invest their money in a doubtful speculation. The President is J. L. Hughes, Public School Inspector, of Toronto, and the Secretary-Treasurer is Fred. S. Pope. General Walker Turnbull, of San Francisco, President of the California Gold Mining Exchange, Registrar Peter Ryan, Frank Rolph, of Rolph, Smith & Co., are amongst the leading shareholders. The capitalization is \$1,000,000 in shares of 10 cents each, non-assessable. The first operations of the company are to be on three rich silver claims—the Rosedale, Flower and May—adjoining the famous Payne group. In addition the company have four gold placer claims on Canadian Creek in the Cariboo Country. These properties seem to afford a prospect of a quick return of the money invested, and the capitalization, under good management, should be quite sufficient to develop several of the properties, which turning out right should furnish enough additional capital to complete the development of the others.

THE Miller Creek Mining Company, whose announcement appears elsewhere in this issue, has headquarters at Spokane, Wash., and a strong and reputable directorate. It operates several prospects near the south fork of the celebrated Carpenter Creek, and close to the famous Wonderful Group. The prospectus is modest and has a good ring about it. Treasury stock is four-tenths of the capitalization. Indications on the face of things are for vigorous development of the properties, and under conditions that permit of economical working.

NORTH-WEST TERRITORIES.

A TELEGRAM was received from Ottawa by Land Agent Ruttan, directing him to suspend entries for mining claims on the Saskatchewan for a month, says the *Edmonton Bulletin*. Several gentlemen from Omaha, Nebraska, who contemplate putting one or more dredges upon the river, had staked claims shortly before the telegram was received, and the agent was therefore unable to accept their entries. Apparently it is the intention of the Department of Interior to provide new regulations, which shall be more in accordance with the conditions recently brought into experience by the introduction of mining dredges than the existing regulations which were framed with a view only to hand mining, and which have not been availed of by the hand miners. Having in view a change in the regulations and there being very few claims entered under the old system, the Government no doubt concluded that it would be better, as the mining season had not yet commenced, to prevent further complications of the new regulations, by temporarily suspending entries until they could be promulgated. They were no doubt aided in reaching that conclusion by the fact of a dispute as to rights existing between the Omaha parties and certain local dredge men. At the request of a deputation of South Edmonton citizens and the Edmonton Board of Trade the Department has been asked by wire to grant the five locations already staked, on the ground that as the parties came here in good faith and at

great expense under the regulations as they existed, it was not fair to shut them out of the benefit of those regulations, the local dredge men having withdrawn their objection to those locations. The Department has also been asked to grant five other locations to the Omaha company, they having offered to take second choice to the local dredge men. The claims are a square of ten acres, according to the section survey system. The Omaha men have ordered two mining scows from John Walter, which are now under construction, and have their machinery on the way.

A SUCCESSFUL COMPANY MEETS.

Yesterday the Golden Gate Mining and Development Company of Rainy River, Ltd., held their first general meeting for the election of officers, reception of annual report and confirmation of by-laws. It was well attended, and the proceedings were characterized by unanimity. The following directors were elected:—Col. A. H. Macdonald, Q. C., of Guelph, President; R. H. Ahn, mining broker, etc., Rat Portage, Vice-President; Alan Sullivan, C.E., M.E., Rat Portage, Judge Fitzgerald, Port Arthur, Dr. John S. King, Toronto, H. McMaster, Toronto, Dr. U. M. Stanley, Brantford, R. E. Le Vesconte, Barrister, Toronto; Dr. D. M. Dunning, Mono Mills. J. H. Cheeseworth, mining broker, Toronto, was elected Sec-Treas., and Mr. Le Vesconte, solicitor. The auditors elected were Dr. Hunter, of Orangeville, and Mr. Clay, chartered accountant, Toronto.

The success of the company up to the present time has been very gratifying to all the shareholders. One of the properties secured by the promoters of this company was disposed of at a handsome profit after demonstration of its gold bearing qualities. The company have now two other properties under development and these they purpose placing on the market at a very early date. Arrangements have been made to proceed with development work on what is known as the Spike Point property, situated on Shoal Lake (west) near the celebrated Mikado and Cornucopia mines. Assays of \$14 to \$16 per ton have been taken off the surface from this location. The company has also a tract of 211 acres, or the equivalent in area of five ordinary locations, about 18 miles from Rat Portage. It is known as the Golden Gate mining location.

It has a number of very large and promising veins. Some samples taken here assay at thousands of dollars to the ton. The company will offer a small block of stock for sale at \$1.50 per share. This will enable it to enter on vigorous work during the present season. The company has the appliances on hand for this work and these will be put to use as soon as the snow leaves the ground.

At the meeting an important matter came up for discussion—namely, the desirability of increasing their holding in the Lake of the Woods and Rainy River regions, and a resolution was carried instructing the management to make application to the Ontario Government for 10,000 acres of mining lands, the same to be taken up on the same terms as were granted to the South African Development Co. represented by Col. Engledue. The usual vote of thanks was tendered to the chairman and founders of the company. Mr. Ahn will at once proceed to Rat Portage to look after the interests of the business.

The Canadian Miner will help you to make money. A showing is made of the mining industries of the country every week, and the really important mining events recorded, rather than the unimportant, or rumors circulated for selfish purposes.

ONTARIO NEWS.

Lake of the Woods.

The Rat Portage *News* is responsible for the story that that city is to have a new seven-story block to cost \$70,000.

The Howard mine, H.P. 301, has a shaft 50 feet in depth, with drift at that level of 25 or 30 feet. The vein which was 4 feet 6 inches at the surface has increased in width as depth has been attained. The vein is a true fissure vein and very rich in gold.

Mr. Harry Dixon of Ottawa who has been in town for the last few days has left for West Hawk Lake to look after some mining properties he has there. Mr. Dixon has for the last few years been interested in the mica and plumbago mines in Buckingham, and lately sold one of his mines for a large sum to an Ottawa syndicate.

The weather here has been very soft for the last couple of days, and there is a general rush to get supplies out to the mines before the roads break up. Most of the mines here being surrounded by water it is necessary to get in a sufficient supply to last them till navigation opens up, and all the teams in town are in great demand just now.

The Sweden mine at Rosslund, Ontario, has a shaft down 90 feet. Assays on the shaft vary from \$4.27 to \$38.61. The shaft is 7x9 feet and at that depth the larger dimension touches the wall on each side. The vein has steadily increased in width and on the average in richness as depth has been attained. Drifting is being done at a 70 foot level. Mr. Buehler is manager of this mine.

The Rat Portage *News* has learned on good authority that Messrs. Crawford and Doyle have concluded the sale of H. P. 300 to a Winnipeg syndicate through Mr. Kirby for the sum of \$15,000 cash. Considerable development work has been done on the property, the shaft being down 50 feet. The vein is clean cut and vertical with compact walls and is said to be one of the finest yet uncovered. Two drifts made show up a splendid body of ore and very rich. It is the intention of the company to put in a stamp mill, air compressor and hoisting apparatus as soon as possible. Mr. W. Caldwell is in charge and under his supervision this property will be soon classed among the working mines.

The trains are every day bringing large crowds of men looking for positions into town, and the hotels are taxed to their utmost capacity to accommodate all. The class coming in now are mostly experienced men and it is no trouble now to get good practical miners.—G.A.P.

The celebrated Sultana has now reached a depth of 300 feet, and the bottom of the shaft is 200 feet under lake level, yet so close is the rock formation that the shaft is dry all but for the little dripping that occurs in all mines in the country. The vein at this depth is 50 feet wide. The Sultana turns out from \$2,500 to \$3,000 in gold every week. Twenty-five tons of ore a day is the average. Twenty-five to thirty men are employed at the mine.

Mr. Burley Smith, M.E., once visited the Sultana, and his keen eye took in the character and probable extension of the big vein. Shortly afterwards he secured a portion of the water front in the direction in which the strike of the vein lay. During the past winter a novel style of mining has been going on with rich results. The drill is being operated from the ice and is boring,

down under the water. Cribbing will this summer make a permanent and unusual mine out from the shore, and judging from the indications the drill shows the mine will be another Sultana.

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Sudbury.

The Government diamond drill has given up working on the Gordon coal property, and will probably be employed by another company for some time.

(From the Sudbury Mining News.)

Dr. Maxime Schumann and Mr. D. O'Connor have gone to Lake Wahnapiatae.

C. J. Kettyle leaves with men and teams for North Wahnapiatae, to develop his iron location there.

The Hub Gold Mining Co. have a shaft sunk to a depth of 40 feet on the foot wall and are now cross-cutting to the hanging wall. The ore is looking better as depth is attained.

We are informed that although only a limited amount of development work has been done on the Dewar property on Wahnapiatae River, indications are so satisfactory that work will be continued.

Messrs. Morrison, Swale and McBurnie of Callendar, are interested in gold properties on Lake Matagamashing, and have gone north to examine and decide as to putting in men to open up. We understand they have decided to push work as soon as spring opens.

Mr. G. Harwood, Secretary of the Citizens Gold and Coal Mining Co. reports a steady demand for shares. As buyers are principally from parties in the district, it shows conclusively that those on the ground have abundant faith in the operations of the company and also in the properties secured.

Manager McConnell of the Crystal Gold Mining Co., is rushing in supplies while the snow lasts. Mining operations are being carried steadily on at this famous mine, and one of our best experienced miners who has no interest in the mine states that the ore being taken out now is the finest he has ever seen.

Work on the Comstock gold mine is progressing nicely under the management of H. F. Downing, foreman of the mine, and shaft is down 90 feet. The quality of the ore is good and shows a fair percentage of free gold. The late thaw has caused considerable delay on account of water in shaft, but arrangements are being made to overcome this difficulty. When a depth of 100 feet is attained drifting and crosscutting operations will be commenced. There is scarcely any doubt from present indications that the mine will pay handsome dividends.

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Around Manitou.

The Neepawa mine, with an area around it of 106 acres, is rapidly pushing its work. A camp for 40 men has been erected, and a blacksmith shop, magazine, etc. A shaft 7x10 feet has been sunk to a depth of 50 feet, partly on and partly at the side of the vein: a crosscut of 40 feet touches the other wall of this wide vein and from it a drift is being run along and in the body of the vein. A 20 stamp battery is to be put up this summer and machinery, including a hoisting plant, in addition to what is now on the spot.

Mr. Hugh Alston, manager of the Neepawa Mining Company, in the Manitou Lakes, and one of its principal stockholders, came in from the Manitou on Saturday. Mr. Alston was seen at the Leland House by a

Winnipeg *Free Press* reporter, and in speaking of the "blanketing" system, he said "one could not realize the amount of excitement and indignation which is being felt and expressed all along the line over the action of the Ontario Government in granting the enormous block of mineral lands to one syndicate. At Wabigoon and Rat Portage nothing else is being talked about, "If this action of the Government is consented to by Parliament," said Mr. Alston, "it will have the effect of setting back prospecting in the district of the Lake of the Woods, Seine River and Manitou for several years, as prospectors will not go out upon what may result in a wild goose chase."

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Seine River.

SAW-BILL:—The development of these mines is progressing most favorably, according to the latest reports received by the management. Notwithstanding the extremely rough weather during February and March, and the very bad roads, the contractors for transportation have successfully transported the heaviest pieces of machinery, including the motors for the mill, which weigh 5,600 lbs. a piece and several boilers weighing 8,000 lbs. a piece. At Saw-Bill all the heavy machinery is at the mine. Seven hundred cords of wood have been cut ready for fuel purposes, and square timber for the mill building is being prepared—some 80,000 to 100,000 square feet. Another large sleeping camp and dining hall for the men have been erected and an office and house for the manager are being built. A complete assay outfit has arrived at the mine and the assay office is now being built. The work of erecting the mill building will be started as soon as the weather is favorable. The ore at present being taken from the drifts and from the bottom of the shaft keeps up its uniform grade of richness, and between 200 and 300 feet of drifting has been done, and a double shift of miners are now at work in the drifts at the 120-foot levels. Work has also been started on another shaft some 250 feet south of the present one, and about 200 feet from the intersection of the big Hammond reef, which crosses the Saw-Bill property at right angles to the vein now under development.

HAWK BAY:—The Ledgerwood hoist and boiler have been successfully transported to the mine, besides all the other machinery and supplies that have so far reached Bonheur Station. The compressor plant was expected to reach Bonheur Station last week and by the end of this week the company expect to have all the machinery and supplies on the ground. A large sleeping camp for the accommodation of 50 to 60 men has been erected; also a new dining camp, which was used for the first time on Saturday before last. The blacksmith shop is well under way and will be a commodious building, and used as a machine shop in connection with repairs. No. 2 shaft has now reached a depth of 25 feet and is at present being timbered. No. 1 shaft is also being timbered with a view to having everything in shape at the earliest possible moment so as to be able to operate both shafts with the compressor plant, which it is intended will be located between the two shafts, which are some 350 feet apart, and will be connected by drifts. Both shafts are looking exceedingly well and the ore is highly mineralized, with occasional specks of free gold showing. The vein in No. 2 shaft is steadily increasing in width as depth is gained, and at present is almost four feet wide. The progress up to date is

fully as satisfactory as at Saw-Bill. Between 80 and 90 men are now on the pay roll of these two mines.

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Parry Sound.

Mr. Sands is convinced from examination that the McGown formation is part of the same vein which has been found further north and that it is at least 100 miles long, and that next summer will see a large number of mines in this district.

Last week we had an interview, says the Parry Sound *Star*, with Mr. George Sands, an old time miner, who has been assisting in sinking the shaft in the McGown gold mine. Mr. Sands said the vein first found dips at an angle of 40 degrees and that at the depth of about 20 feet the shaft left this vein; farther down they struck a second and larger and richer vein which evidently came from under the lake. The quartz between the two veins bears gold of at least \$20 to the ton, while that in the vein is very rich.

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Wabigoon.

Mr. Larson, of Wabigoon, who, with some others, is interested in the new town now being started at that place, takes exception to the booming notices which have appeared in eastern papers, with reference to alleged towns at Black Water Creek, two miles west of Wabigoon station and Denorwick, three miles east of that new town site, says the *Rat Portage News*. It is said in those papers that much traffic is being carried on between inland points and Denorwick while, as a matter of fact, says Mr. Larson, there is none whatever from that point, all being done from Wabigoon station where the C.P.R. have a siding. There is nothing known in the vicinity about the construction of side tracks either at Denorwick or at Black Water Creek. As to the hotel accommodation spoken of as being at Denorwick, it is actually at Wabigoon. Mr. Larson is positive that no land has been surveyed into town lots at either of the places mentioned and expresses surprise at the statements made in eastern papers.

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East Algoma.

Mr. Chas. Beck along with a gang of men and a load of supplies has gone to the Beck claim in McMahan Township. It is located about 35 miles north-east of the Sault. We are informed that Mr. Beck has let a contract to Messrs. Drake and Smith of Goulais Bay to sink 25 feet on the vein. Mr. Beck talks very confidently about the prospects of this claim. "It is close to the Plutus we are told," says the Sault St. Marie *Courier*, and therefore should be in a good part of the country.

The assay office and laboratory of the Great Northern Mining Corporation, says the *Courier*, is now fully furnished and actively at work. The latest addition to their apparatus to arrive was one of Hoskins' hydro-carbon furnaces. Mr. Wylie, the superintendent, has some forty samples now under way; these samples have come from all parts of the district, some from as far away as near Missinabie station on the main line of the C.P.R., and also from the Wabigoon district. Most of the assays are turning out very well indeed, one from the Mississauga district went \$32.50 in gold to the ton and some silver. This was from one of Mr. Marks' claims which is being opened up by the Great Northern. Another assay from the neighborhood of Killarney went \$35 to the ton and one of the assays from the Northern Light, near Trout Lake,

went \$10 in gold to the ton, and an assay of copper from the same claim went as high as eighteen per cent. pure copper—which is considered a good assay.

A Massey, Algoma, correspondent of the Sault Ste. Marie *Courier* says: There seems to have been a considerable amount of prospecting done around here during the early part of the winter, and some very good samples have been brought in. Reeve Campbell showed me a piece of quartz today with quite a handsome nugget of gold in it. There is a large amount of territory yet unexplored and from present indications the bush will be full of prospectors when the snow goes. George Bays is pushing work on his claim half way between here and Webbwood and it is stated the indications are good for free milling ore. This vein is large and carries a considerable amount of iron.

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Chips.

The London *Mining Journal* says about Ontario:—The mineral wealth of the province has been practically demonstrated by actual results from such mines as the Sultana, Mikado, Regina and many others. The most eminent mining engineers of the day, representing English and foreign capital, are authorities for the statement that the gold fields of Ontario are the most promising in the world, and when properly developed will astonish the world with the wealth which nature has implanted here. The ore throughout the entire region is almost entirely free-milling, and averages \$20 to the ton.

BRITISH COLUMBIA.

Around Rossland.

The Le Roi shipped 240 tons of ore over the Red Mountain road last Monday.

Stock sales were very slow until the other day, when 30,000 shares changed hands.

The Royal Gold vein has increased from two to five feet in the last dozen feet.

The tunnel in Diamond Dust is now in 86 feet, and the face seems well mineralized for that depth.

Some very pretty copper ore is being opened up in the Commander just now. The mine has improved very much of late.

W. A. Ritchie is in the east negotiating the sale of the Enterprise, a property which he and associates purchased last summer.

The Stock Exchange project is meeting with opposition in some quarters, but is being rapidly pushed on by the committee in charge.

Work has been suspended on the Robert E. Lee, pending the sale now being negotiated by D. W. Linnard in London of the Lee, Maid of Erin, Gopher, and Homestake.

W. M. Dunn has become interested in the East St. Louis, a promising claim near the Lily May. Some very good ore is being taken from the shaft being put down on the property.

Fred. Oliver, manager of the Monte Cristo, has gone over to the Salmon River district to examine the Robert J. for Frank Loring, who is largely interested in the property.

James F. Wardner, who sold the Colonna in Montreal, went up to see the mine the other day, and returned much pleased. He thinks the Colonna is going to be one of the good mines of the camp.

A Rossland despatch says: A special to the *Miner* from Nelson announces another

big strike on the Silver King. The ore body is eight feet wide and is all good smelting ore. The body was discovered some time ago by diamond drilling. The management is greatly pleased with the showing.

There is a well-founded impression that the Jumbo sale for \$500,000 will go through. The option expires April 1st. The mine has been examined by three experts, the last one being Mr. Fowler, who examined the War Eagle last summer, when negotiations for the sale of that property were proceeding in London.

From January 1st to March 20th inclusive the total shipments of ore from the mines at Rossland to the smelter were 12,555 tons. During the same period 1,182 tons were milled in the camp. Shipments for the past week were:—Le Roi, 1,060; War Eagle, 120; Iron Mask, 15; O. K., 14; Giant, 21; total, 1,230 tons. The Trail smelter shipped last week 102 tons of matte to Omaha.

A cable from London announces that Mr. Grant Govan, who was out here last summer in connection with the Corbin option on the War Eagle, has successfully floated a big mining company which is to operate in British Columbia, chiefly in West Kootenay. When Mr. Govan was here he was much pleased with the country, and expressed his determination to return at the head of a strong syndicate. He secured options on a number of properties, some of which will, no doubt, be taken up. Hon. D. W. Higgins, Speaker of the British Columbia Parliament, is to be associated with the new company. It is expected Mr. Govan or some of his associates will be here shortly.

The first meeting of the shareholders of the Empire Gold Mining and Milling Company was held last week, and resulted in the election of W. A. Campbell as president; Colin Campbell, of Grand Forks, vice-president; and T. P. Long, secretary and treasurer. The other directors are J. F. McCrae, Montreal; Thomas Anderson and R. Omon, Grand Forks. A report was read from G. R. Propper, that one great advantage of the property was that it was within the town site of Grand Forks, and that the railway must pass within 60 feet of the tunnel. This tunnel was in 12 feet on the ledge, and was exceedingly promising. Upon this report the directors appropriated \$500 to continue the work of development.

The Calgary *Herald* congratulates the people of that vicinity on the cut in the Canadian Pacific railway rates on freight to British Columbia. Hay can now be shipped into Kootenay at a fair profit. Oats will be exceedingly profitable under the new schedule. On pork, poultry, potatoes, butter and cheese and general farm produce the rate from Calgary to Rossland is 95 cents per 100 pounds in carload lots, and \$1.20 on less than carload lots. The rate on grain, vegetables and millstuffs from Edmonton, MacLeod and other points north and south of Calgary to Trail is 35 cents per 100 pounds. On pork, poultry, butter, eggs and produce of this class the rate from these points is \$1.20 on carload lots and \$1.35 on smaller lots.

In addition to purchasing the Columbia and Kootenay mine, F. Aug. Heinze has shown another substantial evidence of his faith in the country, he having raised \$1,500,000 by mortgaging his entire property in Butte, Montana, for the purpose of immediately pushing the construction of the Columbia & Western Railway from Robson through the Boundary country to Penticton. Capt. Hall says that the second test of Le

Roi ore has proved entirely satisfactory, but no detailed statement will be ready for some days. Four thousand pounds of delayed mail matter arrived on Friday, but from Tuesday to Friday no mail left via Spokane. The Paris Belle case, affecting a portion of Rossland town site, was decided the other day in favor of the company.

The Morning Star will resume operations within the next ten days. A contract has been entered into with the Jenckes Machine Company, of Sherbrooke, Quebec, for a 40-horse-power hoisting engine and boiler, steel cable, self-dumping ore bucket, steam drill, and a Cameron sinking pump. The machinery is on the cars of the Red Mountain railway between Spokane and Rossland. The contract stipulates that the machinery will be in operation within two weeks.

Closing quotations on the Spokane Exchange, March 16th, were as follows: Butte, 3 1-2c bid, 4 3-4c asked; Boston, 6c bid; Commander, 16c bid, 21c asked; Cariboo, 48c asked; Deer Park, 17c bid; Dellie, 14 1-2c asked; Evening Star, 14c asked; Great Western, 13c bid, 15c asked; High Ore, 3 3-4c bid; Iron Mask, 42c asked; Josie, 48c asked; Josie Mac, 12 1-2c bid; Jeff Davis, 17c bid; 20c asked; Le Roy, \$7.50 asked; Monte Cristo, 12 1-2c bid; Novelty, 7 1-2c asked; Phoenix, 16c asked; Poorman, 3 1-8c bid, 4 1-2c asked; Rossland Red Mountain, 21c asked; St. Elmo, 10c asked; Silverine, 6c asked; West Le Roi, 18 1-2c bid, 19 1-2c asked; Noble Five, 58c bid, 60c asked; Rambler, 54c bid; Reservation, 9c asked.

Unlisted stocks were quoted as follows:—Amsterdam, 2c asked; Boundary Creek, 3 1-2c asked; Big Three, 10c bid; Cameronia, 15c asked; Cracker Jack, 10c asked; Dardanelles, 22c asked; Ellen, 7 1-2c asked; Gladiator, 11 1-2c asked; Grand Prize, 4c asked; Granite, 10c asked; Gold Dust, 2c asked; Hill Top, 10c asked; Idler, 11c bid, 12 1-2c asked; Knight Templar, 3 1-4c asked; Little Darling, 2 1-2c asked; Miller Creek, 6c asked; Maryland, 3-4c asked; New York, 5c asked; Old Ironsides, 6c asked; Palouse Bluebird, 4c asked; Palo Alto, 10c asked; Primrose, 8c asked; Rochester, 3c asked; Sunset, 5c asked; Vulcan, 1c bid, 1 1-4c asked; Washington, 24c bid; Wall Street, 3 1-8c asked; Queen Anne, 1 3-8c asked; St. Joe, 3 1-4c asked.

Sales were as follows:—2,500 Monte Cristo at 11 3-4c, 1,000 Rambler at 50 3-4c, 1,000 Rambler at 53c, 1,000 Rambler at 54c, 2,000 Jeff Davis at 15c, 1,000 Jeff Davis at 16 1-2c. Before the call 1,000 Deer Park were sold to the highest bidder for 17 3-4c. Sales after hours:—1,000 Deer Park at 18 1-4c, 2,000 Boston at 6c, 5,000 Dardanelles at 20c, 2,000 Noble Five at 60c, 5,000 Deer Park at 18 1-2c.

The following sales are reported by the Reddin-Jackson Company (Limited), for the week ending March 16:—2,000 Evening Star at 13 1-2c, 10,000 Deer Park at 19c, 10,000 Monte Cristo at 15c, 1,000 Silverine at 7 3-4c, 20,000 Deer Park at 23c, 2,000 Homestake at 10 1-4c, 300 Dardanelles at 21c, 500 Elise at 5 1-2c, 500 O.K. at 27 1-2c, 3,000 Pickup at 1 1-2c, 7,000 Yale at 1 1-2c, 500 Good Hope at 4c, 5,000 Noble Five at 62c, 1,000 Red Eagle at 7 1-2c, 1,500 Yale at 1 1-2c, 500 Elise at 5 1-2c.

CONFIDENCE IN ROSSLAND.

At the Queen's Hotel this morning, says the *Star* of this week, I met a gentleman who has faith in British Columbia, and who has

proved it. He is Mr. Carlos Warfield, of Trail, B.C., partner of Mr. August Heinze. Their belief in the wealth of British Columbia is such that they have just placed a mortgage upon their property in Butte, Montana, for \$1,500,000, besides investing heavily in the Columbia and Kootenay mine. The money raised by the mortgage will be used for the purpose of pushing the construction of the Columbia and Western Railway from Roburn, through the Boundary country to Penticton.

"We have put our money in," said Mr. Warfield to me, "because we expect to get it out again, together with a lot more. We have not done it for our health, but because we believe that we can make a large profit. I am not here to sell anything, for we have not anything to sell. We expect to get our money back by legitimate business, derived from the development of the resources of the country.

"Neither Mr. Heinze nor myself have gone into British Columbia on speculation. We knew that the wealth was there, because we have had reports from men whom we sent there to find out all about the place. In other words, having found out that we could, by spending money, make more money, we turned in and took hold. We know what we want, and we are doing our best to get it, and I feel certain that we shall not be disappointed. British Columbia is a wealthy country.

"You may rest assured," continued Mr. Warfield, "that when people put big private capital into railroads and mining, that they are not doing it for their health."

"Then you think that Torontonians who have invested money have a good chance to get returns?" I asked.

"Certainly, provided they know what they are doing, and into whose hands they are entrusting their money. If the cash is spent in legitimate development work, they need not be afraid. I take it, those who invest know what they are putting their money into. But I do feel sorry for some of the people who go to the West, thinking that they can pick up gold in the streets, or that everybody can be a bank manager. The gold is not quite so plentiful as that. I have noticed, however, that the young fellows of this country generally quickly make up their minds to do good work, and they have the right stuff in them, too. It augurs well for Canada."

SHIPMENTS OF ORE.

From January 1st to March 13th inclusive the shipments of ore from mines at Rossland to smelters were as follows:

Mine.	Tons.
Le Roi	7,587
War Eagle	2,247
Columbia & Kootenay.....	455
Iron Mask.....	597
Jumbo.....	91
Josie	126
Cliff	61
Red Mountain	56
*O.K	72
I.X.L	12

Total

*Concentrates.

From January 14th to March 13th inclusive the ore milled in the camp was as follows:—

Mine.	Tons.
O.K	1,182

Shipments for the past week were:—Le Roi, 774; War Eagle, 110; Iron Mask, 80; O.L., 17; total, 976 tons. During the

same period the O.K. milled 146 tons. The Trail smelter shipped during the past week 136 tons of matte to Omaha.

Slocan.

The Byron N. White Company, owners of the Slocan Star mine, have declared a 5 per cent. dividend of \$50,000, payable March 25th. This will make \$350,000 paid by this company in dividends since August, 1895, the largest amount paid by any mine in Kootenay.

Mr. W. A. Campbell, of Rossland, has bought the Lusana and Morning Star No. 7 claims on Lemon Creek, four miles from Slocan river. Mr. Campbell says he will stock the properties. Chicago men will become interested in them. The ledge is 20 feet wide, of which there are four feet of galena ore. The lead carries gold also.

The air compressor recently purchased by the Slocan Star has been set up and the drills are now rapidly cutting the remaining 450 feet in No. 5 tunnel to reach the ore chute. When completed the tunnel will be 950 feet in length, at which point it will strike the ore body at a depth of 600 feet. At present the mill is turning out about 30 tons of concentrates per day, which are being shipped to the Omaha smelter. The monthly pay rolls show an average of 100 men employed at the mine and mill, with wages account of between \$10,000 and \$12,000 per month.

During the week ending March 13th the ore and matte entered at the port of Nelson from the mines and smelters of Southern Kootenay was valued at \$185,690. The ore was drawn about equally from the Slocan and Trail Creek districts. This week's shipments bring the total shipments from the district for the present year up to \$1,801,289, exclusive of the Slocan shipments exported over the Nakusp & Slocan Railway during the present month, which were entered at the outport of Revelstoke. The shipments for the week were:—Bullion and matte—Trail smelter, 241,830 pounds; Hall Mines smelter, Nelson, matte, 82,390 pounds. Ore—Le Roi mine, Rossland, 580 tons; O. K. mine, Rossland, concentrates, 4 tons; Slocan Star, Sandon, 30 tons; Noble Five mines, Slocan, 99 tons; Antoine mine, Slocan, 17 tons; Rambler mine, Slocan, 64 tons; Payne mine, Slocan, 250 tons; Whitewater mine, Slocan, 47 tons; Reco mine, Slocan, 54 tons; Surprise mine, Slocan, 17 tons; Kootenay Ore Company, Kaslo, 252 tons; Black Diamond mine, Ainsworth, 20 tons. Total for week, 1,596 tons, \$185,690. Total so far for March, 2,975 tons, \$390,376. Total for February, 5,201 tons, \$562,853. Total for January, 4,543 tons, \$675,506. Total via Revelstoke 1,807 tons, \$172,554. Total so far for 1897, 14,526 tons, \$1,801,289.

On the week ending March 12th, Slocan mines shipped 600 tons of ore, valued at \$75,000.

A concentrator will be erected at the south fork of Kaslo Creek, and a wagon road will be constructed to it.

The Goodenough has declared a dividend of \$24,000. This mine is a private one, in the hands of a few who developed it themselves.

The following are the shipments of ore through Revelstoke to American smelters from March 1st to March 16th:—Slocan Star, 200 tons, \$15,209; Idaho, 100 tons, \$11,856; Enterprise, 80 tons, \$10,391; Mountain Chief, 20 tons, \$1,840; Monitor, 40 tons, \$4,780; Ruby, 15 tons, \$1,716.

The Nelson *Tribune* says:—"Tom Clandge

has recorded a somewhat unique agreement in the office of the Mining Recorder at Kaslo. He undertakes to organize a company to take over the mineral claims St. Charles and Alameda, situated near the head of Jackson basin. There are to be issued 1,000,000 shares of the par value of \$1 each. Two hundred thousand of these are to constitute the treasury stock, and the remainder is to be divided between Cludge and the present owners, he to take 401,000 and they 399,000 shares. He undertakes to provide an expert to make an examination of the property, and to advance a small sum towards opening the trail so they can be reached." Tom is a modest man, or he would want at least half as his share. As for the dear public, they may consider themselves favored that they are allowed to supply the money to develop the claims. That they will divide one-fifth of the profits should the properties prove dividend payers is further proof of the promoter's generosity.

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Nelson.

Sixteen placer claims at Salmo have been recorded at Nelson.

A rumor floats that the Kansas City Smelting and Refining Company will build smelting and refining works at Nelson to treat the output of East and West Kootenay.

Engineer Perry, in charge of the location survey of the Crow's Nest Pass Railway along Kootenay Lake, reports that his work has been completed to within 10 miles of Balfour. He has gone to Slocan City to superintend the construction of the Slocan River branch, more especially wharves at different points on Slocan Lake.

Reports from Salmon are to the effect that there is considerable excitement in that town in consequence of the finding of placer gold by some workmen engaged in excavating a cellar under a store being erected by Oliver Brothers, of Spokane, for C. W. Peterson. The chief find was made by J. H. Doudlah, who picked up a nugget worth about \$10.

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Boundary Creek.

The snow is going away very rapidly on south slope of the mountains and mine owners are getting out to work as rapidly as practicable. Parties who claim to know of some rich placer diggings and free-milling quartz veins up the North Forks are getting their prospecting outfits together and expect to open up a new country 60 miles north of here on the East Fork before the season is over. From all reports there are great possibilities in store for that section.

CAMP MCKINNEY.

The Maple Leaf claim on the Cariboo vein in Camp McKinney has been sold to G. R. McAuley for \$10,000.

At present the district is suffering for the want of a greater number of practical miners, says the *Midway Advance*. During the whole of the winter the Cariboo Mining and Milling Company at Camp McKinney has been short-handed, and in all the different camps of the district good men are in demand.

Quite a number of men are getting ready their outfits, and prospecting trips will soon be the order of the day, says the *Midway Advance*. The neighborhood of Christina Lake will receive much attention at the hands of prospectors this summer. The Similkameen country is also attracting attention, and will not doubt be the scene of much exploration.

The Cariboo mill at Camp McKinney, says the *Vancouver World*, is running steadily night and day milling about 20 tons every 24

hours. It is one of the great dividend-paying mines of the province. Their pay roll is \$3,000 per month. They are down 200 feet. James Monaghan is one of the principal owners. The foreman is J. P. Keane, who shot Mat. Roderick, the supposed robber of the gold bullion from the Cariboo mine last fall. Mr. Keane says that he did the shooting with no more thought than in stroking a letter in writing. He heard Roderick's rifle click and the next moment he shot him. Mr. Keane did what any other man would have done under similar circumstances. Roderick was undoubtedly the robber, for he had returned to the camp in the night, and had harness on him for carrying the bullion. A number were watching for him, including Mr. Keane. He was leading his horse, and undoubtedly going to the spot where he had hidden the bullion, when all of a sudden Mr. Keane met him. The directors of the mine are yet hopeful of finding the bullion as soon as the snow goes off the ground.

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Pannings.

The *Nelson Miner* says that Mr. Heinze will build a railway from the Kootenay to the Coast.

The C.P.N. Company will put a steamer on the route between Vancouver and Texada Island to meet the new business caused by mining operations.

The rush of freight down the Columbia valley is more than the present transportation companies can handle, and the result is a blockade near Marcus of freight destined for the Boundary Creek country and Grand Forks.

George Ramswell and Andrew Ericson made a promising find near Laurie, says the *Revel-stroke Herald*. The ledge is on the same slope as the Lanark mine, and the first 4 shots disclosed 2 feet of galena. They had discovered the ledge before, last year, but the surface indications had not before been satisfactory.

Notes of mining near Greenwood are: Great Hesper group, Smith's camp, have begun a 50 foot shaft in ledge of galena, copper and iron pyrites; half interest in Golconda group sold to J. C. Haas; machinery for hoisting in at Jewel claim near Long Lake; G.A.R., Providence camp, developing; tunnel on Mother Lode in 200 feet.

The Earl of Norbury, Captain T. B. Armstrong and James Wardner have secured 160 acres on the west fork of the Kootenay River, at the point where the Crow's Nest Pass Railway is to cross the river. They intend to lay out a town there and will name it Wardner. The proposition is to make it the chief town of East Kootenay. Its situation will make it the centre point for almost every mine in the East Kootenay district.

The *Nelson Tribune* says:—If American smelters find it profitable to export lead, there is no reason why Canadian smelters should not treat British Columbia ores and export the product to Europe. The Dominion Government should not allow the present condition to remain by which the Government of the United States collects an import duty from British Columbia ores, and secures the additional advantage of having the ores treated in American smelters.

The decision of the C.P.R. to build the Crow's Nest Pass railroad and take its chances on getting a subsidy afterwards is a master stroke on the part of the directors of that great corporation, says the *Rossland Miner*. While the politicians and newspapers of Eastern Canada are questioning whether the Crow's Nest railway should be built at all, and if so, whether it should be a Government undertaking, the

railway company calmly goes ahead and builds it, thus getting a better cinch than ever on the Dominion, and especially on the Pacific province.

The *Vancouver Daily World* says: The critical state of affairs in the southeast of Europe is keeping at least 100 British Columbia and Ontario mining companies from coming out in London, Eng., says a cablegram, unless the outlook clears. It is expected the Canadian mining boom will not come off this spring. Of the few recent Canadian mining concerns which have braved the unfavorable state of the market only about half are taken up by the public yet. The prospectus of a new company has been issued. The capital is £600,000 in 600,000 £1 shares, of which 400,000 are now issued at par. The Earl of Essex and the Earl of Huntingdon are on the board. The vendors will sell several properties at Trail Creek and elsewhere, and some town sites to the new company for £400,000, of which 200,000 shares form part payment.

President Bell Irving, of the Vancouver Board of Trade, gives the following figures as the official returns to January 1, 1897:—Including coal, the output of the mines has increased from \$3,588,413 in 1893, to \$7,146,425 in 1896, while from 1895 to 1896 the output of minerals other than coal rose from \$2,834,000 to \$4,816,000. For the past year the value of the output from lode mines only was nearly double that of the previous year and about 5½ times as great as in 1894. Lode mining has thus suddenly jumped to the position of first importance in the industries of the province. The output of Trail district (gold and copper) has increased from \$702,427 in 1895, to \$1,243,360 in 1896, but the increase has been most conspicuous in the Slocan district, where the product of silver-lead ore has risen from \$1,057,677 to \$2,010,048 in the same time. The yield of placer gold in Cariboo district has increased from \$282,400 in 1895, to \$348,050 in 1896. The production of lead alone has increased from \$78,996 in 1893, to \$721,384 in 1896, while the production of copper has increased four-fold from 1895 to 1896. Of the total production in Canada, British Columbia furnished in 1896, 63 per cent. of the gold, 98 per cent. of the silver, 19 per cent. of the copper, and all the lead.

A large and valuable strike has been made on Lardeau Creek, near the head of Lardeau River. Prospectors have been looking for this lead for five years, as pieces of float have been found in this gulch assaying as high as 8,000 ounces of silver to the ton. Last summer it was located by L. T. H. Carter, and J. Kirkpatrick above the timber limit, on a mountain at the head of the creek. The ledge is from 12 to 20 feet wide, and carries silver, copper glance, galena and iron, assaying from 80 to 8,000 ounces in silver, besides gold, copper and lead. The copper has been bonded for \$100,000, to Macpherson & Snowden.—*Rosslander*.

"This is a section," says the *B. C. Mining Journal*, "that has been passed over by many old miners and pronounced barren of any mineral, but my opinion is that Nicola will be in the swim yet. Large beds of gypsum have been found, and float rock that assays as high as \$57 in gold. No ledge of the latter has been struck, but just as soon as the hills are clear of snow they will be alive with tenderfeet looking for this particular ledge, so you need not be surprised to hear of some rich finds in Nicola yet."

If you want to make money through gold mines, buy the *Canadian Miner*. Price 10 cents per number, or \$2 per annum.

BRITISH COLUMBIAN DIVIDENDS.

THE following table compiled by the Spokane Stock Reporter show the number of mines in southern British Columbia that rank as dividend payers or that have returned profits to private owners:—

TRAIL CREEK DISTRICT, B.C.			
	Capital.	Shares.	Dividends.
Le Roi, g. c.....	\$2,500,000	500,000	\$325,000
War Eagle, g. c.....	500,000	500,000	187 000
SLOCAN DISTRICT, B.C.			
	Capital.	Shares.	Dividends.
Rambler Cariboo, s. l.	\$1,000,000	1,000,000	\$20,000
Reco, s. l.....	1,000,000	1,000,000	100,000
Slocan Star, s. l.....	500,000	1,000,000	300,000
CAMP MCKINNEY DISTRICT, B.C.			
	Capital.	Shares.	Dividends.
Cariboo, g.....	\$800,000	800,000	\$141,410

The following mines are owned by private individuals and have returned profits. The exact amounts are not obtainable, but are estimated below:

Mine.	District.	Estimated Profits.
Payne, s. l.....	Slocan	\$250,000.00
Idaho, s. l.....	"	132,000.00
Poorman, g.....	Nelson	50,000.00
Ruth, s. l.....	Slocan	50,000.00
Whitewater, s. l.....	"	40,000.00
*Washington, s. l.....	"	20,000.00
Slocan Boy, s. l.....	"	25,000.00
*Goodenough, s. l.....	"	35,000.00
*Noble Five.....	"	50,000.00
*Northern Belle, s. l.....	"	20,000.00
Antoine, s. l.....	"	10,000.00
Surprise, s. l.....	"	20,000.00
Monitor, s. l.....	"	15,000.00
*Last Chance, s. l.....	"	50,000.00
*Dardanelles, s. l.....	"	"
*Recently incorporated.		

Following is a partial list of incorporated mines making regular shipments, which thus far have distributed no dividends:

Mine.	District.	Cap.	Stock.	Shares.
Jumbo, g. c.....	Trail	\$500,000		500,000
Columbia & K'ly, g. c.....	"	250,000		2,500
Hall Mines, s.....	Nelson	£300,000		300,000
Josin, g. c.....	Trail	\$700,000		700,000
Iron Mask, g. c.....	"	500,000		500,000
O. K., g.....	"	1,000,000		1,000,000

g., gold; g. c., gold, copper; s. l., silver, lead; s. c., silver, copper.

It may be added that since this list was compiled the Rambler-Cariboo has declared a second monthly dividend of \$20,000 and announced a probability of a similar dividend being paid monthly right along. The Two Friends mine, in the Slocan, has also announced a dividend. In the Slocan numerous properties besides those named in the list have been profitably worked, but being as a rule owned by a few individuals with no stock on the market it is difficult to obtain particulars.

In Trail Creek, besides the two properties named as dividend-payers, the Centre Star is a property with millions of dollars' worth of ore in sight from the proceeds of which the owners could pay dividends at any time did they not prefer holding their ore and awaiting developments in connection with smelting, etc. As the list stands, a necessarily incomplete one, it is still a very creditable showing when it is considered how recently work on an extensive scale set in in this district, and it must be admitted that the silver-lead properties of the Slocan came out well in the comparison with the results of the gold and gold-copper propositions.

POSTPONED.

THE meeting at Rat Portage of mining men, called for three days in early April, has been postponed till early June. Most of the persons invited expressed a desire for a later and more seasonable opportunity to examine into the mineral resources of the Lake of the Woods and Rainy River basins.

THE WAR EAGLE DEAL.

THE British Columbia *Mining Record* thus discusses the War Eagle deal:

In our last issue we referred to the prospectus of the War Eagle Gold Mining Company issued in London, England. That the statements contained in it did not have the desired effect upon English investors is not to be wondered at.

But what is to be said of the sale of the War Eagle property to Canadian capitalists for \$700,000, when it was valued in England at \$2,500,000? It certainly gives rise to a suspicion that all was not as it should have been.

Now we understand that there is much dissatisfaction among the smaller shareholders with the price obtained for the mine from the Gooderham syndicate. Shares were selling at \$1.60, and the holders at this price will suffer a loss of about 20 cents on each share held. It is yet to be decided whether the provisions of the British Columbia law were fully complied with when the sale was made.

The whole transaction has a queer look in the face of the fact that an English syndicate offered to pay \$200,000 more for the mine than was accepted from the Gooderhams. We understand that they agreed to pay \$200,000 down and the balance in 30 days. If so, the English offer was decidedly better than \$700,000 cash down, which the Gooderhams paid.

It is absurd to suppose although it is offered as an argument in favor of the Gooderham deal, that, having paid \$200,000 or even \$100,000 in cash, the English capitalists might have failed to pay the balance.

The whole transaction is certainly queer to say the least of it, and although we are glad to see the mine in the hands of such men as the Gooderhams, we are believers in fair play to all, small as well as great.

The War Eagle sale brings to the front once more the necessity of compelling all companies, no matter where incorporated, to comply fully with the incorporation laws of this province. If the act providing for the registration here of foreign companies does not go far enough, let it be amended so as to protect British Columbia investors.

Until this is done, or it is made clear that foreign companies must comply with our laws in every respect, there is a risk to shareholders if they invest in shares of a company incorporated in Washington or elsewhere, no matter how low they can buy the shares at.

In this connection we would suggest that the law should oblige all treasury shares to have the word "treasury" printed across their face, to distinguish them from promoters or other stock offering. This would afford some security to buyers, and would serve as a check upon promoters throwing their shares on the market.

During the past six months as many as 150 samples of gold bearing quartz mined in Frontenac County have been brought into Toronto. This is, doubtless, news to a large number of citizens, but it is nevertheless a fact. This number or thereabouts have been known to have been exhibited in the city, but certainly there must have been more of which there is no knowledge on record of those whose business it is know of such matters. Of course, of the samples viewed, some contained only minute portions of gold, strange to say the majority of it being free-milling. In some cases arsenic, sulphur and other refractory substances were affiliated with the gold in the ore.

OXIDIZING STEEL AND IRON.

A GREAT many parts of machinery are exposed to moisture and dampness, even if not directly to water. It does not always protect such pieces to paint them, but they can easily be fixed so that they will rust very little, if at all, if they be properly oxidized. A very good way is to make a mixture of nut galls and glacial nitric acid. After standing awhile add a grain or so of nitrite of silver or copper sulphate to a small quantity of the mixture (say one ounce or so), and the solution is ready for use. Clear the surface of the metal with pumice stone, but do not use emery. Dry and slack lime may be used after pumice stone. Then cover the surface with liquid and let stand until covered with a coat of oxide. A scratch brush should then be used vigorously upon the metal and the coating, and standing repeating twice 24 hours apart. After scratch-brushing the second time, clear the surface of the metal and rub with a little linseed oil and camphor.

OUR ASBESTOS.

BEFORE the development of the Canadian fields, the Italian asbestos was supreme in the market. For nearly twenty years Italy had been looked to for the best grades of the fibre. But the Italian asbestos industry, once so important, is already on the down grade. The difficulties of mining are very great, and unduly increase the cost of production. The asbestos itself, judged by the latest standards, is of inferior quality. It is not easy to spin, and it does not pulp well in the making of paper. As a matter of fact, Canada contains the greatest asbestos region of the world, in the sense that while its mines are practically unlimited in productive capacity, the product is of a quality which fully meets the requirements of the newest and most exacting of the innumerable uses that are daily being found for it.—*Paper Maker.*

A ROSSLAND HERO.

AN act of heroism on the part of Jim Hemsworth saved the lives of two miners working in the Young America shaft recently, says the *Rossland Miner*. The shaft is down over 100 feet, and the two miners were working in the bottom. The heavy iron bucket filled with ore was being hoisted, and was within twenty feet of the surface, when suddenly there was a clattering of machinery. The hand crank had been carried away at the elbow, and Hemsworth, who was winding it, was thrown to the ground and stunned for a moment.

The bucket descended with frightful velocity on the men at the bottom of the shaft. Realizing that it meant instant death to his partners below, Hemsworth threw himself bodily on the hoist, and in an instant his right arm was jammed into the cogs of the revolving machinery, which ground the fleshy part of his arm and lacerated it to his shoulder. But he stopped the descending bucket.

Superintendent Shields blocked the machinery and released the plucky Hemsworth. When asked was he hurt much he only said, "D— the difference so long as I saved the boys."

Jim was taken to the camp and had his wounds dressed. The elbow cap will have to be removed, and Hemsworth will not be able to work for some time, but Lineham, Dodd & Stevens, local agents of the company, will make arrangements for the injured man's benefit while he is disabled.

Superintendent Shields said yesterday that in all his mining experience of 25 years, and his experience in mine disasters, he had never witnessed a more heroic effort to save the life of his fellow-workmen than that exhibited by Jim Hemsworth.

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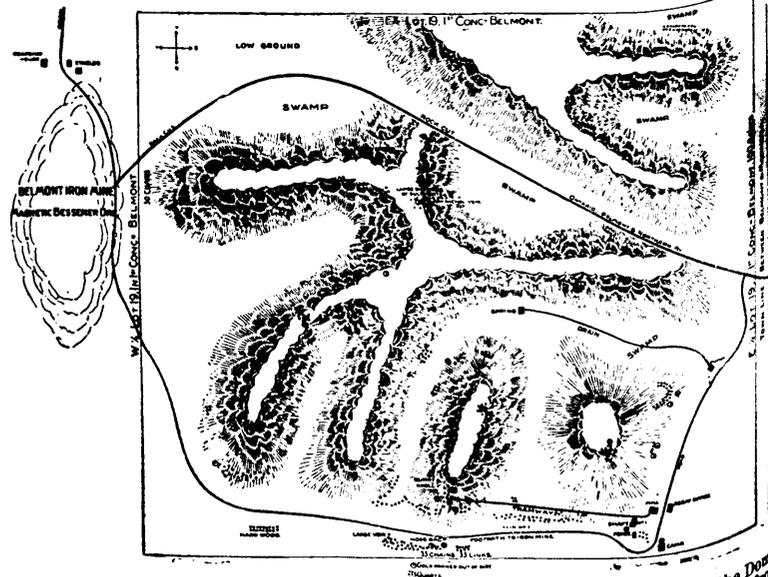
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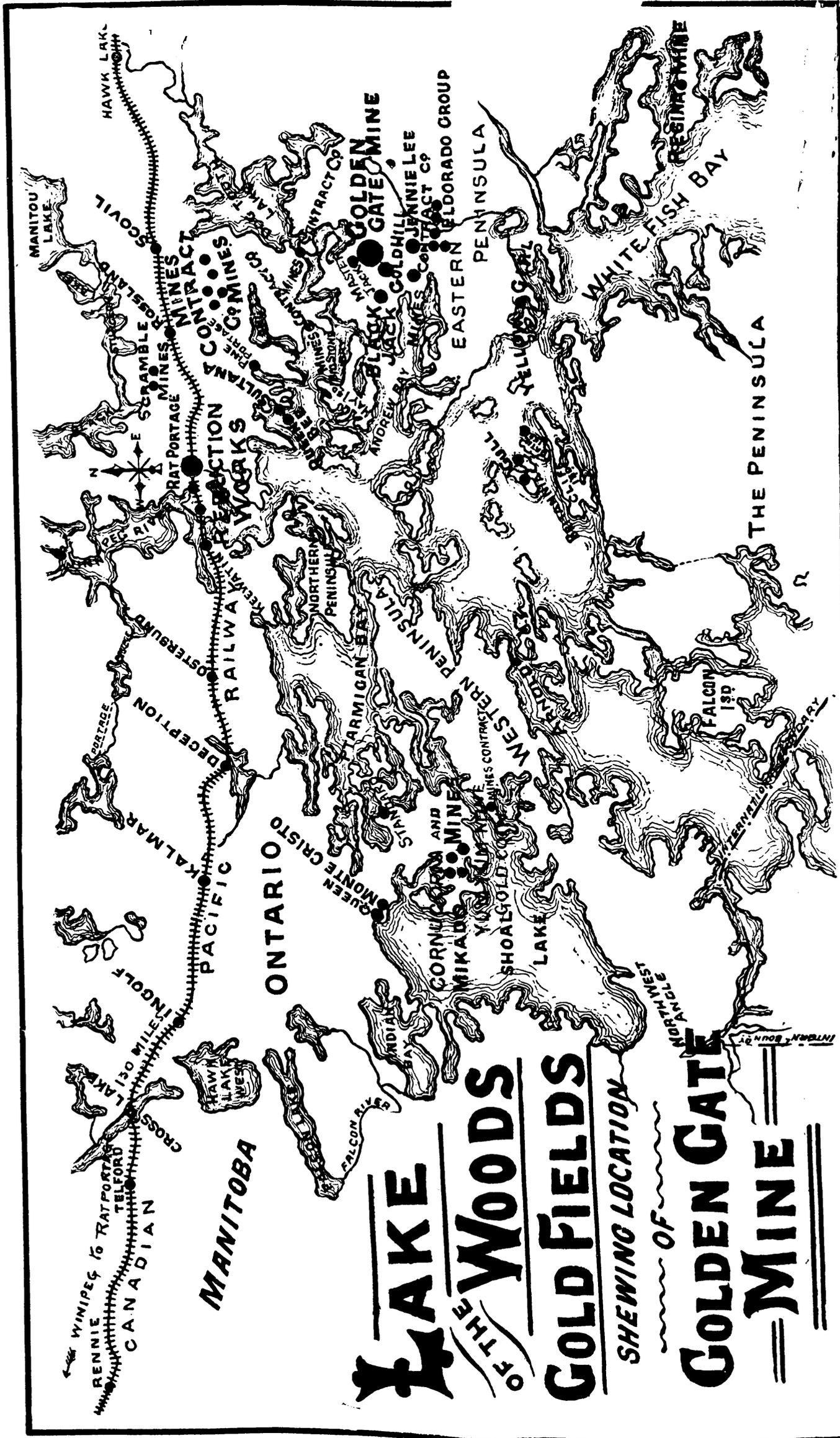
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ABSOLUTELY NON-ASSESSABLE.

Head Office **ROSSLAND, B.C.**
Mines north of Rossland, head of Murphy Creek.

Depository : THE BANK OF MONTREAL.

Guarantors : THE TORONTO FINANCIAL CORPORATION.

Directors and Promoters :

E. L. CLARK, PRESIDENT,	Rossland, B.C.	J. FYFE, VICE-PRESIDENT AND TREASURER	Acton, Ont.
WM. LOUNT, Esq., Q.C., M.P.	Toronto.	THOS. R. McMACKON	Tilbury
WM. CUMMING	Rossland	J. W. MOORE	Rossland
W. H. McMACKON,	Tilbury	F. BULLIVANT	St. Catharines
LYON LINDSEY (Lindsey, Lindsey & Bethune)	Toronto	J. L. G. ABBOTT	Rossland
W. E. SAMPSON	Toronto	FRED. P. BENJAMIN	Montreal
L. L. DEVOIN, SECRETARY,		Rossland, B.C.	

DIVIDENDS GUARANTEED

On a special block of Stock at the rate of ten per cent. per annum, payable half-yearly, now offered for sale by tender, closing the 20th April, 1897.

This is a development company organized for the purpose of buying, selling and developing mining properties in British Columbia, and is at present engaged in active work on eight full-sized claims, viz : Ethel No. 1, Ada L., Iron King No. 4, Blue Bell No. 1, Elk No. 1, Bert, Tenderfoot, and Dorothy, all in one block and situated at the head of Murphy Creek in close proximity to the Yellowstone Group and Heather Bell. The Ethel Group properties are well mineralized ; ore taken from shafts 15 and 23 feet on the Ethel No. 1 assays \$7, \$12.90 per ton, and a more recent assay \$17, in gold, which compares most favorably with the assays of ore from the richest mines in this (Rossland) district at the same stages. Contracts have been let for a hundred feet more in each shaft, to be completed by the end of May, when more extensive operations will be undertaken. Development work can be carried on at minimum of expense. The northern end of the group being nearly 1,000 feet higher than the southern end makes it suitable for operating by tunnel, which saves the expense of hoisting and pumping plants. In proximity to the Trail Smelter, with a good road directly to it, and the very near advent of a railway, the preliminary survey of which passes through the Ethel Group, will place it on a working basis excelled by none in the camp. The capitalization being only 187,500 shares per claim, and the rich indications of the ore, together with careful and practical management, should insure the utmost confidence in the future profits of this company. The operation of the mines is under the direct supervision of C. W. Smith, an experienced mining engineer from Cripple Creek, Colorado, and the greatest possible results may be anticipated.

While the management of this Company feel assured that pay ore will be reached within a few months, they do not overlook the fact that during the first few years of development the expense of procuring the most improved machinery and appliances, sinking shafts and other incidental work may prevent a company from paying dividends with regularity. The present shareholders have therefore made arrangements with THE TORONTO FINANCIAL CORPORATION (with whom securities have been deposited), whereby that Corporation has guaranteed the payment of dividends or interest at the rate of TEN PER CENT. per annum for the first five years on the allotted price of this special issue of preferred stock, the script for which has the guarantee endorsed thereon. The issue of stock is offered for sale by tender with a view of expediting development, and work will be pushed forward as rapidly as possible consistent with judicious and expert management, thus assuring to the purchasers of this stock that the savings of the mines will enable the management to continue paying permanent dividends. Tenders are hereby called and will be received by The Toronto Financial Corporation, at its Head Office, 86 King Street East, Toronto, Canada, up to 3 o'clock p.m., Tuesday, the 20th day of April, 1897, the minimum price being 75 CENTS PER SHARE.

Application forms, prospectus and maps can be obtained at the office of this paper and at the offices of

The Ethel Group Gold Mining Co., Ltd.

34 East Adelaide Street, Toronto, Ontario,

And Columbia Avenue, Rossland, B.C.

Offices: RAT PORTAGE---75 Canada Life Building, TORONTO---and 411 Board of Trade Buildings, MONTREAL.

Preferred Stock Dividends Guaranteed.

CO-OPERATE FOR SUCCESS!

The Mines Development Co.

HEAD OFFICE - - - 68 Victoria Street, Toronto.

AUTHORIZED CAPITAL - \$2,500,000

Divided into 2,500,000 Shares at \$1.00 Each.

OFFICERS

President,	GEORGE McHUGH, M.P.
Vice-Presidents,	EDMUND E. KING, M.D., F. R. JAMES.
Treasurer,	F. A. MULHOLLAND.
Secretary and Manager,	ALAN C. THOMPSON.

DIRECTORS

GEORGE McHUGH, M.P., Lindsay.
EDMUND E. KING, M.D., Toronto.
F. R. JAMES, Manager Golden Goblin Mining Co., Toronto.
ARTHUR S. THOMPSON, M.D., Toronto.
R. L. JOHNSTON, Barrister, Toronto.

ALAN C. THOMPSON, Broker, Toronto.
F. A. MULHOLLAND, Merchant, Toronto.
DONALD C. ROSS, Barrister, Toronto.
THOS. HOWARTH, Banker, Oakville.
LOUIS W. MULHOLLAND, President Deer Park Mine, Rossland.

MINING EXPERTS

For Ontario—ARTHUR S. THOMPSON, M.D. For British Columbia—LOUIS W. MULHOLLAND.
Solicitors—MESSRS. DICKSON & JOHNSTON, Toronto.

Bound to Pay You

No company organized on the plan of this company has ever been recorded as a failure—if there is no failure there must be success—where there is success you can look for dividends.

This Company has a two-fold safeguard in its management for investors. The officers and directors are all well known and capable business men. Four members of the board are men of practical experience in prospecting and mining development.

2,200,000 shares are in the Treasury to supply development capital.

The entire promoters' stock is held in trust by the Traders' Bank.

100,000 shares now on the market at.....

10 CENTS A SHARE

.....Fully paid-up and not further assessable.

A comprehensive prospectus of the Company's plans and methods of operating on application to

The MINES DEVELOPMENT CO.

68 Victoria Street, Toronto.

THE CANADIAN MINER.

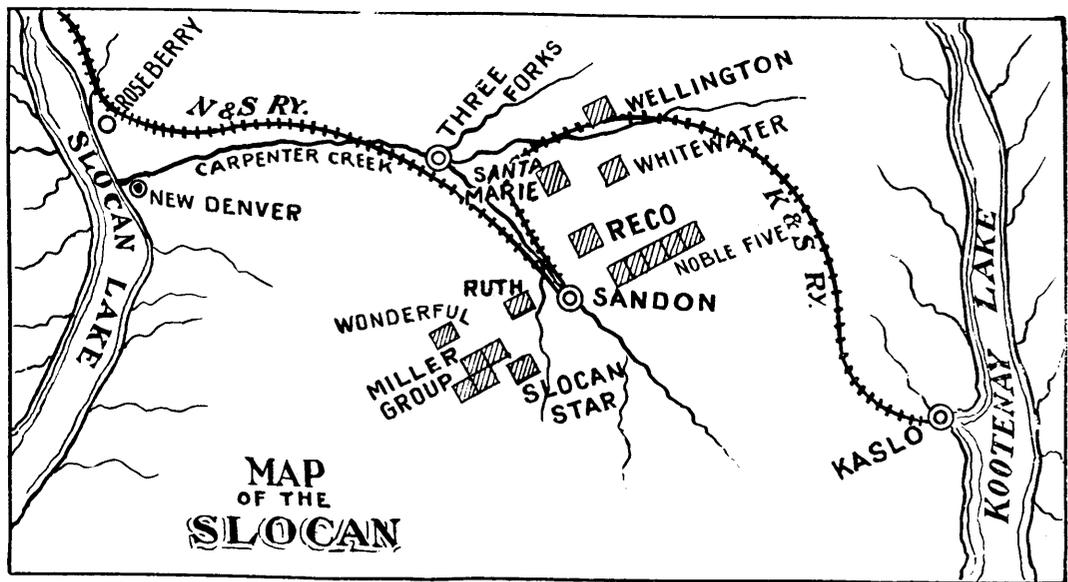
THE CANADIAN MINER'S AUTHORIZED STOCK BULLETIN.

NAME OF STOCK.		NAME OF STOCK.	
Alberta	\$0 15	Kelly Creek	\$0 13
Bondholder	0 14	Lily May	0 20
Bannockburn	0 20	Lake Harold	0 13
British Canadian Gold Fields	0 16	Le Roi	7 50
Big Three	0 10	Ledyard	2 50
Butte	0 04	Lloyd Gold Mining and Dev. Co.	0 06
Colorado Gold Mining and Dev. Co.	0 15½	Miller Group (Slocan)	0 7½
Columbia and Ontario	0 10	May Flower	0 13
Caledonia Consolidated	0 10	Mines Development Co.	0 10
Canada Mutual	0 10	Monte Christo	0 16
Colonna	0 26	Morning Star	0 12½
Cracker Jack	0 09	Monita	0 22
Commander	0 21	Monarch	0 10
Crown Point	0 52	Minnehaha	0 15
Cariboo M. M. C.	0 53	Mabel	0 16
California	0 15	Novelty	0 10
Confederation Mines Dev. Co.	0 10	Norway	0 10
Dellie	0 15	Ontario Gold Fields	0 08½
Deer Park	0 21	Ottawa and Ivanhoe Silver Mines	0 12½
Eagle Nest	0 25	Orphan Boy	0 09
Eldon	0 10	O. K.	0 31
Elise	0 08½	Old Ironsides	0 15
Evening Star	0 15	Phoenix	0 15
Empress	0 21	Pug	0 09
Ethel Group	0 10	Princess	0 25
Eastern Mining Syndicate	0 10	Poor Man	0 06
Eureka Consolidated	0 10	Queen Victoria	0 10
Exchequer	0 10	R. E. Lee and Maid of Erin	0 10
Enterprise	0 20	Rossland Gold Mining Dev. Co.	0 14
Foley	3 50	Rossland Red Mountain	0 25
Germania Gold Mining Company	0 10	Red Eagle	0 08
Great Western	0 15	Santa Marie (Slocan)	0 06
Gertrude	0 15	Slocan-Cariboo	0 10
Golden Gate	1 50	Slocan Star	2 63
Gold Quartz	0 10	St. Elmo	0 11
Gold Hills Exploration and Dev. Co.	0 11	Saw Bill	2 95
Gold and Silver Mines Dev. Co.	0 20	St. Paul	0 12½
Good Hope	0 10	Spokane-Kaslo Mining and Milling Company	0 10
Homestake	0 17	Silverine	0 10
Hansard Gold and Copper Co.	0 10	Silver Bell	0 07
Heather Bell	0 20	Smuggler	0 20
High Ore	0 07	Two Friends	0 35
Iron Mask	0 45	Victory-Triumph	0 12
Ibex	0 03½	Virginia	0 19
Ibex of Slocan	0 25	West Le Roi and Josie	0 27
Iron Colt	0 20	War Eagle (Con)	1 04
Iron Queen	0 04	Washington	0 27
Josie	0 55	White Bear	0 16
Josie Mac	12½	Yale	0 03
Jumbo	0 60	Zilor	0 15
Kootenay London	0 12½		

LONDON (ENG.) QUOTATIONS.—PAR VALUE £1.

Cornucopia (Lake of The Woods)	\$7 50
Mikado	7 50
Gold Exploration Company of Canada (Seine River)	5 00

OVER



Miller Creek Mining Company

DIRECTORS.
 A. J. ROSS, Vice-President Exchange National Bank.
 J. M. ARMSTRONG, Treasurer LeRoi Mining Co.
 W. C. JONES, Member of Congress.
 F. A. DAVIS, Superintendent Summit Mining Co.
 C. H. THOMPSON, Vice-Pres. "Wonderful Group" Mining Co.
 H. C. BELL, Secretary "Wonderful Group" Mining Co.
 E. J. FIELD, Manager "Wonderful Group" Mining Co.

OFFICERS.
 President, C. H. THOMPSON.
 Vice-President, J. M. ARMSTRONG.
 Treasurer, A. J. ROSS.
 Secretary, H. C. BELL.

CAPITALIZATION.
 Capitalization at 1,000,000 Shares of \$1.00 Each, with 400,000 SHARES Appropriated for Treasury Stock. Shares fully Paid-Up and Non-Assessable.

THE PROPERTY.
 It owns in fee the three claims known as the "New Springfield," "Sampson," and "Wonderful Fraction," comprising in all about 130 acres of mineral land, directly adjoining the famous Wonderful Group Mining Company's property in Slocan Mining District, West Kootenay, B.C., only one and one-half miles from the town of Sandon, in the very heart of the Slocan country, which stands without a rival in mining history; and so far every prospect which has been systematically developed has proven a mine. Among the most noted of which are the "Slocan Star" with its record of \$100,000 paid in dividends, and its shares with a par of 50 cts. are eagerly sought for at \$2.60. The "Reco" with its \$150,000 paid to shareholders during the past year. The "Idaho and Alamo" with their \$135,000 to shareholders; the "Goodenough," "Noble Five," "Payne Group," "Ruth," "Wonderful Group," "Reed and Robinson," the "Whitewater," "Wellington," and a host of others.

SITUATION.
 On the mountain lying south of Carpenter creek and close to the town of Sandon is the "Slocan Star," next west is the "Ruth," next west is the "Wonderful," and adjoining this on the west is the "Miller Creek" properties. The Wonderful has extracted a large amount of ore from surface workings by hydraulic mining, and in prosecuting this work their tail race down the steep mountain side has cut a large strong vein (see Field's Report) which courses directly through the entire length of the Miller Creek property, and should it continue that far would give us over 3,000 feet of this heretofore unknown vein, and in that distance several ore chutes ought to be discovered, and one means a fortune.

This vein, and that exposed by the work on Miller Creek, make this group of claims have great prospective value. Title to the property is perfect and lies absolutely in the Company. It was passed upon by W. C. Jones, Attorney-General of the State of Washington. Application will be made for a Crown Grant, and as there are no adverse claimants, the Crown Grant will unquestionably be issued during the summer of 1897.

Adjoining as it does directly on to the Wonderful on the north and east, it ought to have the same veins and character of ore and in order to show what that is, it may not be amiss to here quote from the smelter returns received by the Wonderful from the first five carloads of ore shipped by them (since which time they have shipped many additional cars of like ore).

DATE.	TO WHOM SHIPPED.	TONS.	NET PER TON.	NET PER CAR.
1896				
July 28	Tacoma S. & R. CO.	18.157	\$ 87 07	\$1.392 95
August 4	" " "	21.211	99 47	1.871 28
" 4	Puget Sound R. Co.	15.897	93 98	1.346 52
" 8	" " "	16.165	99 30	1.420 66
" 10	" " "	15.952	102 14	1.449 92

TRANSPORTATION.
 The Canadian Pacific Railway track is within one-fourth of a mile of the Miller Creek Company's property; down hill, easily reached by a gravity tram. Kaslo and Slocan Railway at Sandon, one and one-half miles distant. A good trail is now built to the property from the wagon road on Carpenter Creek, and can be easily and cheaply converted into a wagon road.

DEVELOPMENT.
 There is about one hundred feet of work done where Miller Creek crosses the vein and a few prospect holes. Where Miller creek crosses the property it has made a deep gorge, and exposed the vein at the point described by Mr. Field; it is here the company propose doing the first work, and they will be enabled to drive both east and west on the vein and gain considerable depth from Miller Creek without sinking any shaft or requiring pumps or machinery, except an air compressor and drills which if supplied will enable the work to be done in one-half the time required by hand.

While the company does not claim to have a developed mine, they do believe they have a very valuable property and one which on proper development will take rank with the best of them. And as they own their property in fee, and are absolutely out of debt, and with the assurance that all money received from the sale of treasury stock will be honestly and judiciously expended by investors, and those who buy this stock now and hold it until the property can be developed, will undoubtedly find themselves shareholders in one of the big mines of the famous Slocan.

Following is a letter from Richard Shea, Esq., superintendent of the Rambler-Cariboo property, giving his opinion of the property of the Miller Creek Mining Company:

H. C. BELL, Esq., Sec'y Wonderful Group Mining Co.,
 311-312 Hyde Block, Spokane, Wash.
 DEAR SIR:—Yours of February 12th at hand. You must excuse my delay in answering as I was away when it came. I beg to report as follows on the New Springfield, Sampson and Wonderful Fraction:—There are two (2) ledges running across the Springfield, namely, the Queen Bess and Palmetto which I sold the other day.
 My opinion of the property is that it is as good a prospect as there is in this country.
 Hoping to hear from you soon, I remain, yours respectfully,
 RICHARD SHEA, Supt. Rambler-Cariboo.

A limited number of Treasury Shares are now offered at 7½c. per share.
 Apply to COULTHARD & CO., Mining Brokers, 28 VICTORIA STREET, TORONTO.